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# Application of the Deming philosophy to higher education

Aaron W. Hughey

*A brief overview of the historical significance of the work of W. Edwards Deming, one of the originators of Total Quality Management (TQM), is provided. The essence of the Deming philosophy is that quality must be the pre-eminent consideration in any strategy aimed at long-term success. Within this context, the idea of what constitutes true quality in higher education is discussed followed by an explanation of how Deming's famous '14 points' are as applicable to colleges and universities as they are to business and industry. The author then explains how the '14 points' can be used as a framework for ensuring quality, customer satisfaction and greater accountability within the collegiate environment.*

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W. Edwards Deming, one of the originators of Total Quality Management (TQM), pioneered some of the world's most useful and innovative strategies for enhancing quality and productivity.<sup>1</sup> Initially ignored by American management, Deming's ideas are currently synonymous with sustained profitability and long-term success in the private sector. Furthermore, his uncompromising stance on the key issue of accountability serves as a cornerstone for organizational viability.

Higher education has also been significantly affected by the management revolution taking place in the private sector. Evidence of how Deming has influenced the academic world can be found in the push toward greater accountability at all levels of the educational hierarchy. More than just an attempt to ensure consistency within and between similar programmes, many of the changes that have occurred within our educational systems over the last couple of decades have been motivated by the desire to maximize the quality potential for both the institution and, ultimately, its graduates.

But what does it really mean when we say that a particular institution provides a quality educational experience for its students? Does this refer to some

philosophical dimension that relates to enhanced awareness and a higher level of functioning? Or does it mean that the institution's graduates seem to do well once they leave the institution – in other words, do they receive jobs in their majors? Or does it simply imply that the overhead projectors work, the professors tend to show up for class, and the library has more than three journal subscriptions?

## Competition and customer satisfaction

Perhaps a brief look at history would be appropriate. After the Second World War, American manufacturing concerns shifted toward an emphasis on quantity rather than quality. Deming, acting on behalf of the US government, went to Japan and introduced business leaders there to his management concepts. The Japanese immediately recognized the inherent value of his emphasis on employee involvement and the need to improve processes continually. As a result, the modern economic era has been characterized, to a significant extent, by the Japanese and their strict allegiance to TQM. Unfortunately, it took somewhat longer for the Deming philosophy to be validated on his native soil.

By 1980, international competition was beginning to have a significant impact on the US economy. Many domestic firms found themselves in trouble. Unemployment had increased steadily during the 1970s, causing a noticeable impact on practically everyone's quality of life. Deming was inadvertently rediscovered while companies searched desperately for a solution to their dilemma. Consequently, an entirely new generation of managers has been introduced to Deming and TQM. In order to achieve ultimate success, Deming argued, everyone involved in an organization must be rigorously focused on satisfying the customer through the never-ending provision of goods and services of the highest possible quality at the lowest possible cost. There is simply no other way.

And whereas competition has been a fact of life in the business arena since time immemorial, many colleges and universities, especially public institutions, are just beginning to feel its full effects. History has demonstrated repeatedly that if consumers find that their needs can be met with a higher degree of service and/or at lower expense, then they will inevitably change to an alternative provider. This is the basic principle of supply and demand. Higher education is reluctantly coming to the realization that it, too, is subject to the fundamental laws of economics. In truth, academia has always been much more dependent on its students than it has been willing to admit. In the new millennium, the perpetual enhancement of customer satisfaction will constitute the primary consideration in every decision made. The ability to make this paradigm shift successfully is essential to the survival of higher education.

### **'Quality' in higher education**

Within an educational context, 'quality' tends to be defined from one end of the spectrum to the other. As a result, there is very little chance that two people who happen to be discussing the subject are really even speaking the same language. But a precise and shared definition of quality is needed before meaningful progress can be made toward its realization in higher education. How quality is defined ultimately determines the goals, methods, and priorities in pursuing it. It all comes down to that old Zen proverb that it is impossible to take aim without a target.

An institution's relative position in the pedagogical pecking order is often determined by tradition, test scores, admissions rates, library holdings, publication records, placement rates, and distinguished alumni. In recent years, endowment size, development initiatives, external funding and other economic considerations have also been used to gauge efficacy. In the minds of many influential political and educational leaders,

'quality' is measured almost exclusively within a materialistic context. Whoever has the most must be the best.

Arguably, however, true quality is more closely related to intangibles such as undergraduate advising and instruction, student services delivery systems, and personal involvement in the educational process. For the most part, students are not overly concerned with whether or not the school they attend has substantial external funding and/or a few Nobel Prize winners on the faculty. They simply want to be treated fairly and provided with a solid foundation on which to build a fulfilling life and career. Indeed, having administrators, faculty, and staff who share a common commitment to the general welfare of the students they serve goes a long way toward ensuring quality.

With respect to academic programmes, it has been customary to define quality in terms of rigorous adherence to a set of predetermined standards; ie accreditation. But consider the notion that true quality may not hold every individual or institution to the same yardstick. Although standards have their place, quality also implies the ability to respond flexibly to the particular needs of each individual student. It takes into account students' strengths and weaknesses in relation to their educational and career aspirations.

The bottom line is that having millions of dollars in external funding does not insure high quality – nor does having a distinguished faculty, a student population saturated with outstanding scholars, or a highly respected reputation. The relative quality of the education received at a given institution is largely a function of the commitment exhibited by the administration, faculty, and staff employed there – which is at the heart of the TQM approach.

### **Higher education and Deming's '14 Points'**

The challenges that lie ahead for higher education are enormous. Therefore it is absolutely essential that higher education professionals are adequately prepared to confront those challenges. One of the key ways in which they can better prepare themselves to survive the coming social, political and economic turbulence is to study Deming's '14 points'<sup>2</sup> and understand how they apply to the collegiate environment. Toward that end, what follows is a summary of his '14 points,'<sup>3</sup> together with an explanation of how each can be used to achieve greater accountability, quality and customer satisfaction.

#### *(1) Create constancy of purpose*

Everyone involved in the delivery of programmes and services to the campus population must understand and accept the fundamental importance of providing



exceptional customer service at every available opportunity. If acquiring a college education truly gives significant advantages to the recipient, then those benefits should be obvious and desirable. Students should attend college because it provides something that will help them succeed personally, socially, and vocationally. Yet this potential can be fully realized only if everyone in higher education shares the same vision and is pulling in the same direction. In other words, everyone involved in the educational process must be in total agreement regarding institutional mission, allocation of resources, how priorities will be established, and how goals and objectives will be accomplished.

*(2) Adopt a new philosophy*

In short, what was acceptable as 'standard procedure' in the not-too-distant past is now no longer appropriate. When college was seen as the only viable route for getting ahead, the need to be sensitive and responsive to individual desires, concerns, complaints, and recommendations was not very acute. At most institutions, the decision-making process was driven solely by enrolments. If students wanted to acquire the knowledge and skills deemed essential for success, attending college was really the only option. Students were taken seriously only when it was convenient and/or unavoidable. But now times have changed. In a very real sense, colleges and universities are much more dependent on students than students are dependent on them. Customer satisfaction is no longer an abstract philosophical construct; it is potentially the most important consideration in virtually every decision. The very survival of higher education depends on its ability to make this fundamental change.

*(3) Cease dependence on inspection*

Stated another way, colleges and universities must become much more proactive in their approach to the provision of programmes and services. Higher education professionals have a well-deserved reputation for being primarily reactive in how they respond to issues that affect the on-campus population. Instead of taking the lead when problematic situations arise, they have often had to be coerced into some form of corrective action. When something 'bad' has happened, the typical response by many collegiate leaders has been to try to minimize the potential damage. In the business world, by contrast, the current emphasis is on taking steps to prevent 'bad' things from happening in the first place. Instead of simply responding to changing realities, higher education professionals must assume a more dynamic role in determining what those realities will be at some future point and then developing

programmes and services designed to meet the challenges they represent.

*(4) Minimize total cost*

While money is certainly a key ingredient for the development and maintenance of a quality educational system, it is naive to assume that quality is directly proportional to the number of dollars spent. A tell-tale characteristic of the reactionary mode of thinking involves the 'band-aid' approach to dealing with problems and other difficult situations. In an attempt to deal with the perceived short-term consequences of a given situation, institutions typically spend three times the time, money, and effort needed to solve the problem – ie to take the steps necessary to resolve the problem completely and thus prevent it from occurring again. Higher education professionals need to concentrate more on the long-term future of their programmes as opposed to expending inordinate amounts of time and resources dealing with relatively trivial matters.

*(5) Improve constantly and forever*

In today's market, it is never advisable to reach the conclusion that a particular institution is 'good enough'. Continuous improvement must be a top priority on all fronts – from the blackboard to the balance sheet. The only way to remain responsive to the needs of a diverse and dynamic student population is to strive constantly to provide better services without comparable increases in cost. Higher education professionals must stay in touch with the students they serve. They must monitor student needs continually and offer programmes and services that meet those needs both now and in the future. The over-riding goal of continual improvement must dominate every discussion and permeate every agenda. Nothing should be undertaken in the academic arena that does not add value to the overall enterprise.

*(6) Institute training*

Training is the key to the successful implementation of TQM within the academic environment. Training faculty and staff can be a very complicated, involved and even frustrating process. But if done correctly, it can also be one of the most rewarding dimensions of work in higher education. Sound training forms the basis for a successful college or university. Whereas many institutions do an exceptional job when it comes to the provision of training experiences, others simply do not devote the time and effort needed to ensure that the concepts presented within this article are given the attention they deserve. Far too often, training consists of (a) dispensing technical information, and (b) reacting to situations as they develop. To be truly effective, training must transcend these somewhat narrow parameters to

include the decision-making and problem-solving skills necessary to facilitate customer satisfaction.

*(7) Institute supervision*

Once faculty and staff have received training in the basics of TQM, it is imperative that upper-tier administrators constantly reinforce their commitment to enhanced quality through every aspect of their management style. Most experts agree that, in the future, organizational hierarchies will be much more horizontal than is currently the case at many colleges and universities. In short, there will be far fewer levels between upper administration and students. One logical result of this collapsing of the structure will be the empowerment of those at the lowest levels; ie those closest to the students. Such an arrangement necessarily mandates a management strategy foreign to many higher education professionals. Supervising empowered employees is substantially different from dictating what is to be done centrally. Supervision of personnel within the context of TQM is quite distinct from supervision of task facilitation within a more traditional context.

*(8) Drive out fear*

No one can focus on doing the best job possible if he or she lives in constant fear of the consequences of perceived failure (such as being reprimanded or fired). Many higher education professionals, in the guise of enhancing accountability, have instituted a comprehensive and endless array of evaluations: self-evaluations, student evaluations, peer evaluations, supervisor evaluations, etc. This is further evidenced by the recent interest in implementing post-tenure reviews at many institutions. The intended outcome of these assessments may indeed be to foster and maintain higher standards of commitment and quality. Yet the message that is often received by faculty and staff is one of implicit mistrust and intimidation. Good supervisors must learn to rely minimally on formalized evaluation schemes as a means of motivating staff and thus ensuring that departmental goals and objectives are appropriately met.

*(9) Break down barriers between departments*

TQM requires a system-wide effort on the part of all departments. Higher education professionals who are obsessively preoccupied with who reports to whom, following the appropriate channels, and other issues related to turf protection, often do considerable harm to the institution by keeping the focus from where it should be – on the delivery of quality programmes and services. Being as responsive as possible to the needs of students should be the only real concern. Ideas for improvement should always be welcome; where they

originate from should be relatively inconsequential. Getting the job done efficiently in a humanistic manner, regardless of how the departmental lines appear on an organizational chart, is all that really matters.

*(10) Eliminate unrealistic targets*

Although it sounds good to proclaim that '100% student satisfaction is our goal', in reality this is impossible to achieve. For instance, holding faculty responsible for the fact that not all of their students feel they are doing an acceptable job is unfair and unrealistic. Recognition should be given for effort, not just results. If higher education professionals establish goals and objectives that are inherently unattainable, they are not, as they might think, motivating their staff members to be 'all they can be'. Moreover, establishing recruitment or development goals that are unrealistic serves only to dampen morale and thus needlessly impede performance. In the long run, this leads to high frustration and accelerates burn-out.

*(11) Eliminate numerical quotas*

An academic programme can be highly successful even though it enrolls only relatively few students. The mere facts that the programme is available, and that a great deal of effort has gone into its design and construction, account for a lot more than is often realized. Similarly, if recognition is given only to those who are successful in recruiting high numbers of students (or processing high numbers of forms), then an adversarial atmosphere in the workplace is often created. Holding individuals with different abilities to the same performance standards is inherently counterproductive. Faculty and staff should be rewarded for performing at their own individual level of proficiency.

*(12) Abolish management by objectives*

On the surface, management by objectives (MBOs) seems like a good approach. MBOs can be helpful in establishing priorities and clarifying the various job functions that must be performed. But in the era of TQM and its emphasis on continual improvement, MBOs are self-defeating in that they severely limit creativity by inhibiting employees from proceeding beyond the relatively narrow parameters they prescribe. Higher education professionals must be extremely flexible in order to respond effectively to each student's individual needs. MBOs, by their very nature, limit this flexibility and tend to precipitate meaningless, repetitious conformity.

*(13) Institute a vigorous programme of re-education*

Achieving the goals and objectives of TQM will require extensive re-orientation of the culture in higher



education. Many of Deming's ideas are rather easy to comprehend yet moderately difficult to put into practice. Changing the way people think can be an extremely daunting task, as the proponents of multiculturalism are currently finding out. TQM requires an unwavering dedication to the central concept of complete and consistent customer satisfaction which can only be achieved through empowerment of all organizational members. Such commitment implicitly denotes a fundamental shift in the way many higher education professionals view their role as proponents of student learning and development.

*(14) The transformation is everybody's job*

Instituting the Deming philosophy is not just the responsibility of the upper administration at a college or university, nor is it the primary concern of any one group within the organization. It must be seen as everyone's responsibility. A chief tenet of TQM involves getting the decision-making authority as close to the customer (the student), as possible. This means that everyone at the institution must have a clear understanding of the overall goals and objectives of TQM, as well as how those goals and objectives translate into concrete action. In order to make this connection, it is imperative that everyone works toward the same end. TQM requires the full support of everyone within the organization; it will be a disappointing failure if it is only the dream of one or two people who have read a little about it and decided to 'give TQM a try'.

## Conclusion

Just like their counterparts in business and industry, higher education professionals stand to benefit substantially from the adoption of Deming's ideas. TQM is almost universally recognized as one of the most significant managerial innovations of the last 50 years. Yet it remains a hazy concept to most collegiate

faculty and staff. Higher education advocates would no doubt be hard pressed to disagree with the assertion that achieving and maintaining the highest quality standards possible is of paramount importance. The problem is that without more specific direction and elaboration, such statements are essentially meaningless. They add to the confusion rather than help alleviate it.

At the beginning of this new century, the challenges that lie ahead for society have never been more daunting or complex. Colleges and universities will no doubt play an increasingly significant role within the economic and cultural arenas during the next millennium. TQM offers tremendous advantages for higher education through its provision of new and innovative solutions to both existing and anticipated problems. Deming offers a philosophy and a framework in which the colleges and universities of tomorrow can not just survive, but prevail.

And even though it is currently enmeshed in a myriad of problems, higher education will continue to be an exciting place to work throughout the next century. Demographics and other factors will continue to precipitate both subtle and radical changes in the characteristics of the student population. As such, higher education professionals will constantly be challenged to provide programmes and services that are responsive to the collective as well as the individual needs of their clientele. As Deming so strongly advocates, it is imperative that we continue to stress strict adherence to established standards tempered with the ever present need to be flexible.

## Notes and references

<sup>1</sup>W. Edwards Deming, *Quality, Productivity, and Competitive Position*, Massachusetts Institute of Technology, Cambridge, MA, 1982.

<sup>2</sup>See *op cit*, Ref 1; and W. Edwards Deming, *Out of the Crisis*, 2nd ed, Massachusetts Institute of Technology, Cambridge, MA, 1986.

<sup>3</sup>For a more thorough explanation of Deming's 14 points, see Mary Walton, *The Deming Management Method*, Putnam, New York, 1986.